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BUFFALO OF THE MALHEUR VALLEY, OREGON.

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No living buffalo have been recorded in the State of Oregon by white men, but there is ample evidence that they once occupied the Malheur, Owyhee and Warner Valleys in Oregon, and the open valley and plains country of northeastern California and northwestern Nevada. The Indians have fairly definite records of hunting them in these valleys up to a little more than a hundred years ago, and scattered remains of their bones and skeletons have been found in many places over eastern Oregon. Only during the last two years, however, have any specimens in condition for study come into collections so they could be compared with similar material from other parts of North America.

Now there are about twenty skulls and two almost complete skeletons in the Biological Survey collection in the National Museum, all from the dry bed of Malheur Lake, where they were found literally by hundreds when in 1930 the water dried up so that automobiles could be driven over much of the old lake bed. The skulls were easily sighted at a distance, as they were large and white and lay on top of the firm black mud, and many were in almost perfect condition for specimens. In most cases where a skull was lying on top, the complete skeleton could be found under ground, but much patient work was necessary to recover all the bones of these skeletons. Only a few have been salvaged although many of the skulls have been taken away for private collections and for public museums.

Thanks to the efforts of Mr. George M. Benson, Refuge Keeper of the Malheur Wild Life Refuge, there are now two almost complete skeletons with good skulls of large old bulls

in the Biological Survey collection, and these with many skulls picked up and contributed by others afford a fine series for comparison and study.

In comparison of these skulls with others from southern Texas that may be considered typical *Bison bison bison*, many slight differences are noted, while with the huge northern *Bison bison athabascae*, there are even greater differences. With *Bison occidentalis*, its nearest fossil relative, there is no close connection. In the present-day system of classification it seems necessary to give a subspecific name to this western form of buffalo, although it is now extinct and only skeletal characters can be used in its diagnosis. It may be known by the following designation:

Bison bison oregonus, subsp. nov.

OREGON BISON OR BUFFALO.

Type.—Adult male, skull and skeleton, U. S. National Museum, Biological Survey collection, No. 250145, from the dry bed of Malheur Lake, Oregon. Collected November, 1931, by George M. Benson. Original number 26728 in X catalogue.

Similar in general characters to *Bison bison bison* of southwestern Texas, but slightly larger, with relatively longer and straighter and less abruptly tapering horn cores, indicating wider and straighter horns of a somewhat larger animal. The rostrum or arch formed by the upper premaxillary bones is slightly longer and relatively narrower than in southern specimens; interpterygoid fossa wider and larger; auditory inflations smaller than in typical Texas skulls; molars larger. In the type skull two supernumerary premolars occur inside of the regular series but they are of no taxonomic significance. No external characters are or can ever be known as the form is long extinct. The cranial characters distinguishing it incline somewhat toward those of the much larger *athabascae* but are no nearer to it on the one hand than to southern Texas specimens on the other.

Measurements.—Type skull, old bull, probably nine or ten years old: Basal length, 485; nasals, 204; alveolar length of upper molar series, 148; greatest orbital width, 340; postorbital, 275; mastoid width, 270; spread of horn cores, 655; upper curve of horn cores, 230; lower curve, 285 millimeters. Skull of adult cow from same place: Basal length, 458; nasals, 195; alveolar length of upper molar series, 140; greatest orbital width, 270; postorbital width, 220; mastoid width, 215; spread of horn cores, 495; upper curve of horn cores, 160; lower curve, 180 and 190 millimeters.

The known range of this western form has been given by Dr. C. Hart Merriam in the Journal of Mammalogy, vol. 7, no. 3, p. 211, 1926; and by Vernon Bailey, in vol. 4, p. 254, 1923.